REMARKS

[0010] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1 and 3-33 are currently pending;

- Claims 3 and 5 are canceled herein; and

- Claims 1, 6, 8, 12, and 15-23 are amended herein.

[0011] Claim 1 is amended to include subject matter from dependent claims 3 and 5.

Cited Documents

[0012] The following documents have been applied to reject one or more claims of the Application:

- ***Campailla***: Campailla, U.S. Patent No. 7,136,899.

- ***Graefe***: Graefe, et al., Graefe, et al., "Dynamic Query Evaluation Plans", Proceedings of the ACM SIGMOD International Conference on Management Data, ACM, 1989, pp 358-366.

- ***Lakshmanan***: Lakshmanan, et al., Lakshmanan, et al., "On Efficient Matching of Streaming XML Documents and Queries", 08/02/2006, at <<http://citeseer.ist.psu.edu/lakshmanan02efficient.html>>, pp 1-20.

- ***Altinel***: Altinel, et al., Altinel, et al., "Efficient Filtering of XML Documents for Selective Dissemination of Information", pp 53-64.

Claims _1, 5-9, 12-16, 19-24 and 27-33_ Are Non-Obvious Over _Campailla in view of Graefe and in futher view of Lakshmanan_

[0013] Claims _1, 5-9, 12-16, 19-24 and 27-33_ stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over _Campailla in view of Graefe and in futher view of Lakshmanan_. The Applicant respectfully traverses the rejection.

Amended Independent Claim 1

[0014] The Applicant submits that the Office has not made a prima facie showing that independent claim 1 is obvious in view of the combination of Campailla, Graefe and Lakshmanan. The Applicant submits that the combination of Campailla, Graefe and Lakshmanan does not teach or suggest the following features of this claim, as amended (with emphasis added):

> "receiving an input of data, **the input data conforming to a query language**"

> "a filter engine comprising two or more filter sub-engines, wherein at least **one filter sub-engine is a general filter sub-engine and at least one filter sub-engine is an optimized filter sub-engine**"

[0015] Claim 1 recites in part, "receiving an input of data, the input data conforming to a query language" The Office cites Campailla, Figures 1 and 3, and column 5 lines 50-57 as teaching this element. (Office Action, p. 3.)

[0016] Campailla describes two different elements in this citation. First, a sequence of "information messages" and second, a broker server. The broker server is described as including "query subscription modules." The Office indicates that the teaching of the

"broker module" as including the term "query" demonstrates that the claimed element is anticipated. The Applicant respectfully disagrees.

[0017]   The Office attempts to combine the description of two distinct, non-combinable components, the information messages and the broker server, in order to attempt to find a teaching or suggestion of the recited feature. The Applicant respectfully submits that one skilled in the art would not come to the conclusion that the combination of "input data" and a "broker server" with a query as disclosed in Campailla would result in "input data conforming to a query language" as recited in claim 1.

[0018]   The "broker server" of Campailla is not input data and therefore cannot anticipate "input data conforming to a query language." In fact, other portions of Campailla clarify that "information messages" are merely text, not involving a "query language" as recited in claim 1. For example, col. 5, lines 58-60, describe the "information messages" as merely "stock quote data," "stock symbols," dates, trade prices and trade price figures. Col. 6, lines 13-24, describes the "information messages" as having fields and that the "modules" operate on the "values for the fields." Accordingly, Campailla fails to teach or suggest "input data conforming to a query language" as recited in claim 1.

[0019]   Further, claim 1 recites, in part, "a filter engine comprising two or more filter sub-engines, wherein at least one filter sub-engine is a general filter sub-engine and at least one filter sub-engine is an optimized filter sub-engine."

[0020]   The Office cites Campailla, Figures 1 and 3 as teaching this feature, (Office Action, page 3). Campailla describes "each of the inverse query subscription modules 311 314 processes the information request criteria for a single subscribing user to the

pub/sub system…. Inverse query subscription #n module applies an nth information request criteria defined by a client subscriber #n," (Col. 6, line 1).

[0021]   The Applicant submits that this passage of Campailla describing Figure 3 indicates that each of the inverse query subscription modules is independent of one another and each associated with a subscribing user. Campailla does not teach an association between the modules such that together they comprise a single "filter engine comprising two or more filter sub-engines wherein at least one filter sub-engine is a general filter sub-engine and at least one filter sub-engine is an optimized filter sub-engine" as recited in claim 1.

[0022]   Campailla does not teach or suggest these features of claim 1 and combining Graefe and Lakshmanan with Campailla does remedy this lack of teaching in Campailla. The Office does not cite to these two references, Graefe and Lakshmanan, for teaching or suggesting these features of claim 1, and the Applicant, after review of these references, asserts that these references fail to do so. Accordingly, based on this distinction, the combination of references cited by the Examiner fails to teach or suggest each and every feature of claim 1, and thus this combination of references fails to render this claim obvious.

[0023]   Further, the Applicant agrees with the Office's statement on page 4 of the Office Action which indicates Campailla does not teach "determining whether the input can be processed by an optimized filter sub engine wherein the optimized filter sub engine is configured to handle only a subset of the query language handled by the general filter sub engine, wherein the subset of the query language does not include all aspects of the language; and processing input to derive a result." (Action, page 4). The

Office goes on to indicate on page 4 that "Graefe teaches determining whether the input can be processed by an optimized filter sub engine wherein the optimized filter sub engine is configured to handle only a subset of the query language handled by the general filter sub engine". The Applicant presents the following passages of Graefe herein for convenience to show the limitations of this reference:
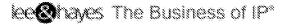
> "Dynamic access modules consist of the same components, over the binding between components is more flexible. The only new component is the decision procedure used to analyze the actual query constants and the data distribution. When accessed module is activated the first step is to evaluate the decision tree. In addition to the decision tree designed by the optimizer, the accessed module must also contain a support function for all possible query evaluation plans. These support functions include comparisons, has functions, etc."(Graefe, Section 5, page 361)

> "Dynamic query evaluation systems include optimized sub filter engine which is a subset of the general query and implement a choice plan operator to realize both Multiplan access modules and dynamic plans. This operator provides the same open, next, close protocol as other operators and can therefore be inserted into a query plan at any location." (Graefe, Section 6)

[0024]   The Applicant respectfully submits that the passages relied on by the Office first, do not accurately represent the citations from which they are based and second, the passages relied upon do not teach or suggest the features of the claim.

[0025]   As at least one example, the Office indicates that in Section 6 Graefe teaches "Dynamic query evaluation systems include optimized sub filter engine which is a subset of the general query and implement a choice plan operator to realize both Multiplan access modules and dynamic plans." The Applicant submits that Graefe discusses a choice plan operator, a Multiplan Access module and dynamic plan as indicated by the Office but does not teach or suggest "dynamic query evaluation

systems include optimized sub filter engine which is a subset of the general query and implement a choice plan operator" as recited in claim 1.

[0026] Furthermore, Graefe does not teach or suggest "the subset of the query language does not include all aspects of the language." The Applicant submits that one skilled in the art would not interpret Graefe to teach or suggest the claimed features.

[0027] As the passages cited by the Office do not teach or suggest the features of the claim with which the Office has associated them, and the Office does not provide any explanation as to how the citations teach the claim features, the Applicant is left to guess how the cited reference, Graefe, can be interpreted to teach or suggest the features of the claim as alleged by the Office.

[0028] Therefore, the Applicant respectfully submits that the reference Graefe does not provide a remedy to Campailla's lack of teaching of the claim features (indicated above), and Graefe does not teach or suggest "the subset of the query language does not include all aspects of the language." The Office does not cite to either Campailla or Lakshamanan to remedy the deficiencies as to Graefe. Thus, the combination of Campailla and Lakshamanan with Graefe fails to teach or suggest "the subset of the query language does not include all aspects of the language" allegedly recited in Graefe. Thus, on this additional basis, the combination of references cited by the Office fails to teach each and every feature of claim 1.

[0029] Claim 1 is herein amended to include subject matter previously presented in claim 5. Claim 1 now recites in part:

"determining whether the input data can be processed by the optimized

filter sub-engine, the determining comprising identifying if the input data

comprises a subset of the query language;"

"directing the input data to the optimized filter sub-engine for processing;"

[0030] With regard to the language previously presented in claim 5, the Office cites

Lakshmanan, page 4 and Figure 1, as discussing or teaching these claim features. The

Office's rejection of previously presented claim 5 is presented herein for convenience

(Office Action, p. 8).

document.)(Lakshmanan, page 4; Figure 1) and wherein the method comprises: determining

whether the input can be processed by the first sub-engine or by the second sub-

engine; if the determining indicates that the input can be processed by the first sub-

engine, then directing the input to the first sub-engine for processing (i.e. "A more clever

approach is to devise algorithms that make a constant number of passes over the document and

determine the queries answered by each of its elements. This will permit set-oriented processing whereby

multiple queries are processed together. Such an algorithm is non-trivial since: (i) queries may have

repeating tags and (ii) the same query may have multiple matchings into a given document. Both these

features are illustrated in Figure 1." The preceding text clearly suggests that a selective sub-engine

occurs in the background that produces multiple matchings in a given document.)(Lakshmanan, page 4;

Figure 1); if the determining indicates that the input can be processed by the second sub-

[0031] As can be seen, the Office states: "The preceding text clearly suggest that a

selective sub-engine occurs in the background that produces multiple matching in a

given document." The applicant respectfully disagrees that the "preceding text" of

Lakshmanan teaches or suggests a "selective sub-engine." As the Office provides no

evidence in support of this conclusion other than mere speculation, the Applicant is left

to guess as to the reasoning for the conclusion. Further, as the Office does not provide

any reasoning other than that shown above on p. 8 of the Office Action, the Applicant

can little more than gainsay. The Applicant refuses to do so. Accordingly, the Applicant asserts that Lakshmanan does not teach or suggest "determining whether the input can be processed by the first sub-engine or by the second sub-engine."

[0032] Consequently, as shown, the combination of Campailla, Graefe and Lakshmanan does not teach or suggest all of the features of amended claim 1. Accordingly, the Applicant respectfully requests that the rejection of this claim be withdrawn.

Claims *3-4, 10-11, 17-18 and 25-26* Are Non-Obvious Over *Campailla in view of Graefe in further view of Lakshmanan and in further view of Altinel.*

[0033] Claims 3-4, 10-11, 17-18 and 25-26 dependent from independent claims 8, 15 and 23, respectively, and stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Campailla in view of Graefe in further view of Lakshmanan and in further view of Altinel. The Applicant respectfully traverses the rejection.

[0034] The Applicant respectfully asserts that independent claims 8, 15 and 23 are allowable for the same or similar reasons presented above as to Campailla, Graefe and Lakshmanan because these independent claims recite features substantively similar to those recited in claim 1 and which distinguish these claims over the combination of these three references as explained above.

[0035] The Office does not rely on Altinel for any of the features, and corresponding deficiencies of the references, described above. Accordingly, the Applicant respectfully asserts that combining Altinel with Campailla, Graefe and Lakshmanan fails to render obvious claims 1, 8, 15 and 23.

[0036] Further, the Office relies on Altinel merely for allegedly teaching or suggesting "whether or not the input conforms to a grammar of the optimized filter sub-engine," as to claims 3 and 11 (Office Action, pp. 31 and 33). The Office cites to p. 57, section 4.2, paragraph 3 of Altinel for such teaching. However, paragraph 1 of this section states that the document arrives at a mere "Filter Engine" for, effectively, processing.

[0037] The Applicant respectfully asserts that Altinel fails to teach or suggest an "optimized filter sub-engine" as recited in independent claims 1, 8, 15 and 23 because the Office fails to address the language recited in these claims which clarifies that the optimized filter sub-engine "is configured to handle only a subset of the query language handled by the general filter sub-engine," (claim 1); "configured to process only a subset of terms of the language, (claim 8); "optimized filter sub-engine supports a subset, less than the whole, of the query language," (claim 15); and "an optimized filter sub-engine that supports only a subset, less than the whole, of a message language, (claim 23). The Applicant respectfully asserts that the other three references, Campailla, Graefe and Lakshmanan, also fail to teach or suggest such claim feature. Accordingly, on this additional basis, the combination of Campailla, Graefe, Lakshmanan and Altinel fail to teach or suggest every feature of claims 1, 8, 15 and 23 from which claims 3-4, 10-11, 17-18 and 25-26 depend.

[0038] The Office also relies on Altinel to allegedly teach or suggest "XML" (claims 4 and 18), "Xpath" (claims 10, 17 and 26), and the "sub-engine . . . configured to support the entire XML query language" and the "optimized filter sub-engine . . . configured to support a subset of the XML query language" (claim 25). However, none of these assertions by the Office address the "optimized filter sub-engine" which is "configured to

handle only a subset of the query language handled by the general filter sub-engine." Consequently, the Applicant respectfully asserts that Altinel fails to remedy the deficiency of Campailla, Graefe and Lakshmanan and that the pending dependent claims ultimately depend from one of the allowable independent claims 1, 8, 15 or 23, respectively. Thus, claims 3-4, 10-11, 17-18 and 25-26 are allowable over the combination of Campailla, Graefe, Lakshmanan and Altinel at least for the reasons expressed herein. These claims may also be allowable for the additional features that each recites and for features that claims 1, 8, 15 or 23 recite.

Conclusion

[0039] The Applicant submits that all pending claims are in condition for allowance. The Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the Office is urged to contact the undersigned representative for the Applicant before issuing a subsequent Action.

Respectfully Submitted,

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